UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/456,429	12/08/99	JI Y	032367-451

021839 HM22/0509
BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA VA 22313-1404

EXAMINER	
GARCIA, M	
ART UNIT	PAPER NUMBER
1627	9

DATE MAILED: 05/09/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

File copy

Office Action Summary

Application No.	Applicant(s)
09/456,429	Ji et al
Examiner	**Art Unit**
Mauri E. Garcia, Ph. D.	1627

-- Th MAILING DATE of this communication appears on the cover sh et with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *THREE* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Apr 26, 2001*

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *52-68* is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *52-68* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

1. The Reply to Requirement for Restriction filed February 28, 2001 (Paper No. 7) and the subsequently filed Preliminary Amendment filed April 26, 2001 (Paper No. 8) are acknowledged. In Paper No. 8 claims 1-51 were cancelled and claims 52-68 were added. Therefore, claims 52-68 are pending.

Election/Restriction

2. In Paper No. 7, Group I drawn to multibinding compounds and pharmaceutical compositions comprising the compounds (original claims 1-15) was elected with traverse. A species of ligand (diltiazem) and specific multibinding compound (compound 79 in Figure 10) were also elected with traverse. Newly added claims 52-68 read on the elected group and species.

3. Applicant's traversal of the Restriction Requirement in Paper No. 7 is now moot in view of the cancellation of claims to all other groups. However, because applicant did not distinctly and specifically point out the supposed errors in the election of species requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)) with respect to the species.

4. As stated in the Restriction Requirement, the species are distinct, each from the other, because their structures and modes of action are different. They would also differ

in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter. This does create an undue search burden; the requirement is still deemed proper and is therefore made FINAL.

5. Applicant's elected species was searched and was not found in the prior art. Thus, the search was expanded to non-elected species which *were* found in the prior art, see rejections below. Also, see MPEP § 803.02:

> On the other hand, should no prior art be found that anticipates or renders obvious the elected species, the search of the Markush-type claim will be extended. If prior art is then found that anticipates or renders obvious the Markush-type claim with respect to a nonelected species, the Markush-type claim shall be rejected and claims to the nonelected species held withdrawn from further consideration. The prior art search, however, will not be extended unnecessarily to cover all nonelected species. Should applicant, in response to this rejection of the Markush-type claim, overcome the rejection, as by amending the Markush-type claim to exclude the species anticipated or rendered obvious by the prior art, the amended Markush-type claim will be reexamined. The prior art search will be extended to the extent necessary to determine patentability of the Markush-type claim. In the event prior art is found during the reexamination that anticipates or renders obvious the amended Markush-type claim, the claim will be rejected and the action made final. Amendments submitted after the final rejection further restricting the scope of the claim may be denied entry.

Information Disclosure Statement

6. The information disclosure statement filed December 29, 2000 contains a request under MPEP 609(c)(2) to consider two copending applications (09/493,081 and 09/674,422) that are related to the instant application. Application 09/493,081 has been considered but application 09/674,422 has not. The application is not available to the examiner. See copy of pertinent page attached to PTO-1449 form.

Priority

7. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

> The instant case is a continuation-in-part of 09/325,557 which claims priority to provisional applications 60/088,465, 60/093,068 and 60/103,866. The applications upon which priority is claimed fail to provide adequate support under 35 U.S.C. 112 for the full scope of the claims of this application. Some of the ligands instantly claimed are not supported in **any** of the aforementioned applications to which applicant claims priority. Applicants elected species is supported in provisional application 60/103,866 and thus the claims directed at this species are awarded the filing date of 60/103,866 which is October 12, 1998. Applications 60/088,465 and 60/093,068 do not disclose the invention now claimed whatsoever. These applications do not contain any reference to the ***specific*** compounds instantly claimed. A broad generic disclosure is **not** sufficient support for a specific entity within the class.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d

1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

9. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 52-58 and 61-67 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 39-52 of copending Application No. 09/493,081. Although the conflicting claims are not identical, they are not patentably distinct from each other because the recited claims in each application encompass embodiments (species of ligands) that are the same. Thus, the markush groups of ligands in each of the recited cases have overlapping members and the compound represented by Formula I in each of the applications could be the same. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 52-54 and 61-63 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description rejection.

There are a virtually unlimited number of compounds that would fall within the claimed genus of compounds of the formula $(L)_p(X)_q$ utilizing the claimed ligands. This is because the instant claims give *no structure* of the linker, X, and thus could encompass an infinite number of variations. However, the instant description discloses the preparation of only a limited number of such compounds.

The present application fails to describe sufficient examples of linkers that are within the scope of the presently claimed invention (encompassing ***any*** linker). The instant description discloses the preparation of only a limited number of linked compounds of the formula $(L)_p(X)_q$. The instant description also

discloses only a limited number of linker moieties. Applicant's claimed scope represents only an invitation to experiment regarding possible linkers.

With respect to adequate disclosure of the scope of the presently claimed generic applicant is referred to the discussion in *University of California v. Eli Lilly and Co.* (U.S. Court of Appeals Federal Circuit (CAFC) 43 USPQ2d 1398 7/22/1997 Decided July 22, 1997; No. 96-1175) regarding disclosure. For adequate disclosure, like enablement, requires *representative examples* which provide reasonable assurance to one skilled in the art that the compounds falling within the scope both possess the alleged utility and additionally demonstrate that *applicant had possession of the full scope of the claimed invention.* See In re Riat et al. (CCPA 1964) 327 F2d 685, 140 USPQ 471; In re Barr et al. (CCPA 1971) 444 F 2d 349, 151 USPQ 724 (for enablement) and University *of California v. Eli Lilly and Co* cited above (for disclosure). The more unpredictable the art the greater the showing required (e.g. by "representative examples") for both enablement and adequate disclosure.

Thus, the disclosure is neither representative of the claimed genus, which encompasses compounds comprising the claimed ligands linked by ***any*** linker, nor does it represent a substantial portion of the claimed genus. Moreover, the claimed genus encompasses members which are yet to be prepared or envisioned. This further evidences that the structural features of the exemplified compounds do not constitute support for the claimed genus or a substantial portion thereof.

13. Please note that there are two separate issues under the enablement portion of 35 U.S.C. 112, first paragraph. To avoid confusion, these have been written as two separate rejections, denoted Rejection 1 and Rejection 2 below.

14. **Rejection 1**: Claims 52-54 and 61-63 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for specific linkers, does not reasonably provide enablement for compounds of the formula $(L)_p(X)_q$ utilizing ***any*** linker. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

It is clear from applicant's specification how one might practice this invention with the specific linkers as defined in claims 55 and 64; however, there is insufficient guidance as to how to make/use any compound of the formula $(L)_p(X)_q$ utilizing ***any*** linker. There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include, but are not limited to:

(1) the breadth of the claims;
(2) the nature of the invention;
(3) the state of the prior art;
(4) the level of one of ordinary skill;
(5) the level of predictability in the art;
(6) the amount of direction provided by the inventor;
(7) the existence of working examples; and
(8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.

See *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

(1-2) The breadth of the claims and the nature of the invention: The claims are drawn to a compound of the formula $(L)_p(X)_q$ utilizing a linker. No other structural limitations on the linker are given and, as such, this could read on a wide variety of structures. Such represents broad scope.

(3 and 5) The state of the prior art and the level of predictability in the art: Multimeric compounds and methods for linking such were known at the time of filing; however, only limited numbers of such compounds were known and the specification gives no guidance to permit one of skill in the art to devise strategies for synthesis of compounds of the formula $(L)_p(X)_q$ utilizing ***any*** linker. The structures of possible variants are sufficiently diverse and one of ordinary skill would not be able to predict such structures. Applicant's claimed scope of compounds represents only an invitation to experiment regarding possible linkers (see also above concerning written description and cases cited therein). See also rejection under 35 USC 112, second paragraph below.

(4) The level of one of ordinary skill: The level of skill would be high, most likely at the Ph.D. level.

(6-7) The amount of direction provided by the inventor and the existence of working examples: Applicants have only provided examples of certain multimeric compounds that consist of ligands with defined linkers. However, no generic strategy for determining linkers is given. One of ordinary skill could not guess, *a priori*, how to make and use compounds having undefined linkers. It appears that the claims omit matter disclosed to be essential to the invention. The instant

specification describes the claimed compounds as being able to bind in a multivalent manner due to their structure (see instant specification, page 16, lines 4-13 & page 33, lines 1-12 and elsewhere) which is interpreted as meaning that the ligands must be linked in some defined way for the invention to function as intended. Claims 52-54 and 61-63 disclose no information on the structure of the linker to be used. See In re Mayhew, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976) regarding omission of essential matter and see also MPEP § 2164.08(c).

(8) The quantity of experimentation needed to make or use the invention based on the content of the disclosure: In claims 52-54 and 61-63 there is no definition of the structure of the linker, X. The instant specification gives one skilled in the art no indication of how to make and use such compounds utilizing undefined linkers. Thus, one of ordinary skill would not have a reasonable expectation of success. Therefore, further research would be necessary to make or use the invention as claimed and the practice of the full scope of the invention would require undue experimentation.

15. **Rejection 2**: Claims 52-57 and 61-66 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for specific ligands known to bind calcium channels, does not reasonably provide enablement for compounds of the formula $(L)_p(X)_q$ utilizing the benzimidazole ligand alone. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

It is clear from applicant's specification how one might practice this invention with specific ligands known to bind calcium channels however, there is insufficient guidance as to how to make/use any compound utilizing the benzimidazole ligand alone. There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include, but are not limited to:

(1) the breadth of the claims;
(2) the nature of the invention;
(3) the state of the prior art;
(4) the level of one of ordinary skill;
(5) the level of predictability in the art;
(6) the amount of direction provided by the inventor;
(7) the existence of working examples; and
(8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.

See *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

(1-2) The breadth of the claims and the nature of the invention: The claims are drawn to a compound of the formula $(L)_p(X)_q$ where one of the ligands, L, can be a benzimidazole moiety and the ligands can be the same. The ligands must be "capable of binding to a Ca^{++} channel".

(3 and 5) The state of the prior art and the level of predictability in the art: Multimeric compounds and methods for linking such were known at the time of filing; however, only limited numbers of such compounds were known and the specification gives no guidance to permit one of skill in the art to **make and use** compounds of the formula $(L)_p(X)_q$ utilizing benzimidazole ligands. Specifically, applicant has not shown how to **use** compounds such as homomeric

benzimidazole compounds and that such compounds would be "capable of binding to a Ca^{++} channel". However, the compounds were known in the art at the time of filing, see Van Albada et al (Accession No: 1995:776400; CAPLUS database on STN). Such compounds would read directly on the claims, but would not appear to have the claimed utility (i.e. be "capable of binding to a Ca^{++} channel"). Applicant's claimed scope of compounds represents only an invitation to experiment regarding possible compounds and their **use**.

(4) The level of one of ordinary skill: The level of skill would be high, most likely at the Ph.D. level.

(6-7) The amount of direction provided by the inventor and the existence of working examples: Applicants have only provided examples of certain multimeric compounds that consist of ligands that are known to bind calcium channels. However, no generic strategy for determining the use of such compounds is given and testing for activity of such compounds is not performed. One of ordinary skill could not guess, *a priori*, how to make and use compounds such as homomeric benzimidazole compounds.

(8) The quantity of experimentation needed to make or use the invention based on the content of the disclosure: In claims 52-57 and 61-66 one of the ligands, L, can be a benzimidazole moiety and the ligands can be the same. The instant specification gives one skilled in the art no indication of how to make and use such compounds (no testing for activity was actually performed). Thus, one of ordinary skill would not have a reasonable expectation of success. Therefore,

further research would be necessary to make or use the invention as claimed and the practice of the full scope of the invention would require undue experimentation.

Claim Rejections - 35 USC § 112

16. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

17. Claims 52-54 and 61-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 52-54 and 61-63 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the structure of the linker (X). Thus, one of ordinary skill would not know the metes and bounds of the claimed invention. See also rejections under 112, first paragraph above.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

19. Claims 52-68 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by copending Application No.09/493,081 which has a common inventor (and assignee) with the instant application.

Based upon the earlier effective U.S. filing date of the copending application**, it would constitute prior art under 35 U.S.C. 102(e), if patented. This provisional rejection under 35 U.S.C. 102(e) is based upon a presumption of future patenting of the copending application. See claims 39-52 of copending Application No. 09/493,081. The recited claims in each application encompass embodiments (species of ligands) that are the same. Thus, the markush groups of ligands in each of the recited cases have overlapping members and the compound represented by Formula I in each of the applications could be the same. Copending Application No. 09/493,081 also discloses the exact compounds instantly claimed, see Figures 10, 13 and 15 in 09/493,081, for example.

This provisional rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. This rejection may ***not*** be overcome by the filing

of a terminal disclaimer. See *In re Bartfeld*, 925 F.2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991).

**Note that the question of priority and thus the establishment of a valid effective filing date has not been resolved in either application.

20. Claims 52-57 and 61-66 are rejected under 35 U.S.C. 102(b) as being anticipated by Branca et al (US 4,808,605).

Branca et al disclose compounds made up two distinct portions (reading on the claimed ligands, L): a benzimidazole portion (denoted A in the reference) attached to a bicyclic compound via a linking group (denoted X in the reference; see Abstract). The two portions of the compounds of Branca et al read on the first two ligands set forth in the claims, attached by a nitrogen containing alkene linker. The compounds of Branca et al read on the linkers claimed in claims 55 and 64 when one X' is a bond, and the other is NR, m=0, Y'' is a bond and Z is alkylene. Six compounds reading on those claimed are taught; these compounds have linkers of 1, 2, 4, and 8 carbons with R=Me, one with a 2 carbon linker and R=$(CH_2)_{11}$-Me and one with a 3 carbon branched linker (R=Me). Specifically see Example 6 (in column 18) of the patent. For clarity, these compounds are shown in an STN structure search printout attached to patent document. These compounds are calcium antagonists and pharmaceutical compositions are also disclosed, see patented claim 16.

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

23. Claims 52-56, 58, 61-65 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joslyn et al (J. Med. Chem. 1988; on PTO-1449).

Joslyn et al teach dimeric 1,4-dihydropyridines that are extremely structurally similar to the compounds instantly claimed (see compounds **9-14** of the reference). The dimeric compounds of the reference bind to calcium channels (see Abstract and Table I). Several compounds were synthesized, having alkyl

linkers of various chain length (see Scheme I and Table II). The "ligands" in the compounds taught by Joslyn et al are similar to the drugs nitrendipine and/or nimodipine connected by a linker (see Scheme I); thus, the dimeric compounds of the reference bind to calcium channels (see Abstract and Table I). Screening for activity was performed on the various dimeric compounds (see "Pharmacology" section, page 1492) in an assay buffer; which would read on the pharmaceutically acceptable carrier of instant claims.

The compounds of Josyln et al and the claims are homologs, with the "ligands" of each differing by a single carbon on the ester substituent on the pyridine ring (ethyl ester versus methyl ester) and have similar utilities as calcium channel antagonists. Thus, the compounds of the references and of the claims have very close structural similarities and similar utilities (see MPEP § 2144.09 "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991)).

Moreover, compounds which are position isomers (compounds having the same radicals in physically different positions on the same nucleus) or homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by -CH2- groups) are generally of sufficiently close structural

similarity that there is a presumed expectation that such compounds possess similar properties. In re Wilder, 563 F.2d 457, 195 USPQ 426 (CCPA 1977).

Therefore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention make the instantly claimed homologs (and pharmaceutical compositions thereof) based on the teachings of Josyln et al of compounds having very close structural similarities and similar utilities. One would have been motivated to do so because homologs often have similar properties and therefore one of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties (i.e. to create more efficacious compounds for treatment).

Status of Claims/Conclusion

24. No claims are allowed.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maurie E. Garcia, Ph.D. whose telephone number is (703) 308-0065. The examiner can normally be reached on Monday-Thursday from 9:30 to 7:00 and alternate Fridays.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jyothsna Venkat, can be reached on (703) 308-2439. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

J. Venkat

DR. JYOTHSNA VENKAT PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

Maurie E. Garcia, Ph.D.
May 5, 2001